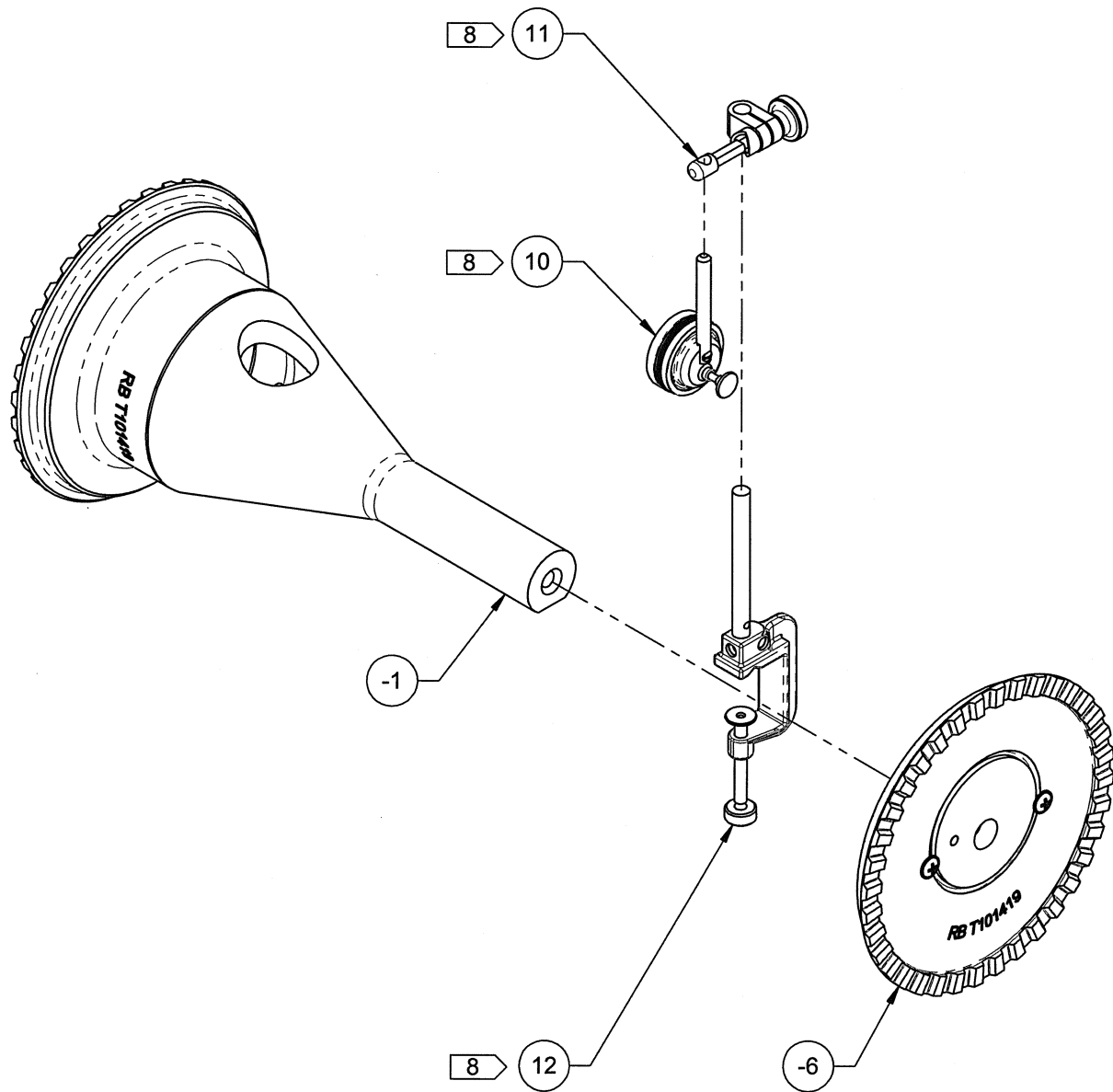


ITEM #	QTY	PART #	PART TITLE
-1	1	RB T101419-1	PLUNGER ASSEMBLY
-6	1	RB T101419-6	TARGET ASSEMBLY
10	1	STARRET#196B1 OR EQUIV.	UNIVERSAL BACK PLUNGER DIAL INDICATOR 0.200" RANGE X 0.001" GRADUATIONS
11	1	STARRET#PT18718 OR EQUIV.	SNUG COMPLETE 5/16" DIA. POST HOLE
12	1	STARRET#PT99437 OR EQUIV.	CLAMP 1-5/16" FLAT/ROUND CAPACITY X 5/16" POST

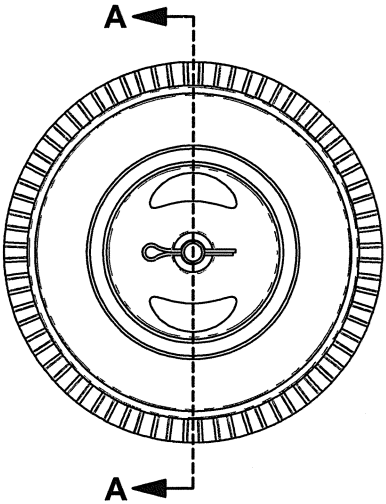


**RB T101419 ENGINE TO TRANSMISSION DRIVESHAFT ALIGNMENT TOOL SET**  
(SHOWN ASSEMBLED FOR REFERENCE ONLY)

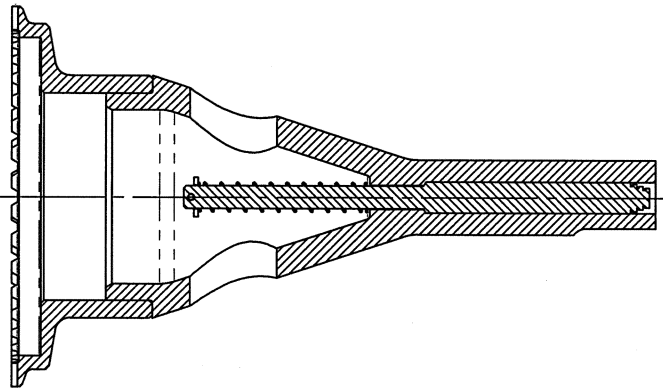
- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) IDENTIFICATION: N/A
  - 7) ASSEMBLE AS SHOWN
  - 8) ITEMS 10, 11, AND 12 MUST BE INDIVIDUALLY PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG
  - 9) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

A	NEW ISSUE	19-851	KPT
REV.	DESCRIPTION	ECN #	BY
DESIGN	KPT	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	MBB	TOOL PART #	REV. A
MFG. APPR.	FK	<b>RB T101419</b>	SHEET 1 OF 10
APPROVED		TITLE	SCALE
		ENGINE TO TRANSMISSION DRIVESHAFT ALIGNMENT TOOL SET	NTS
DATE	2019-08-13	COPYRIGHT © 2019 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

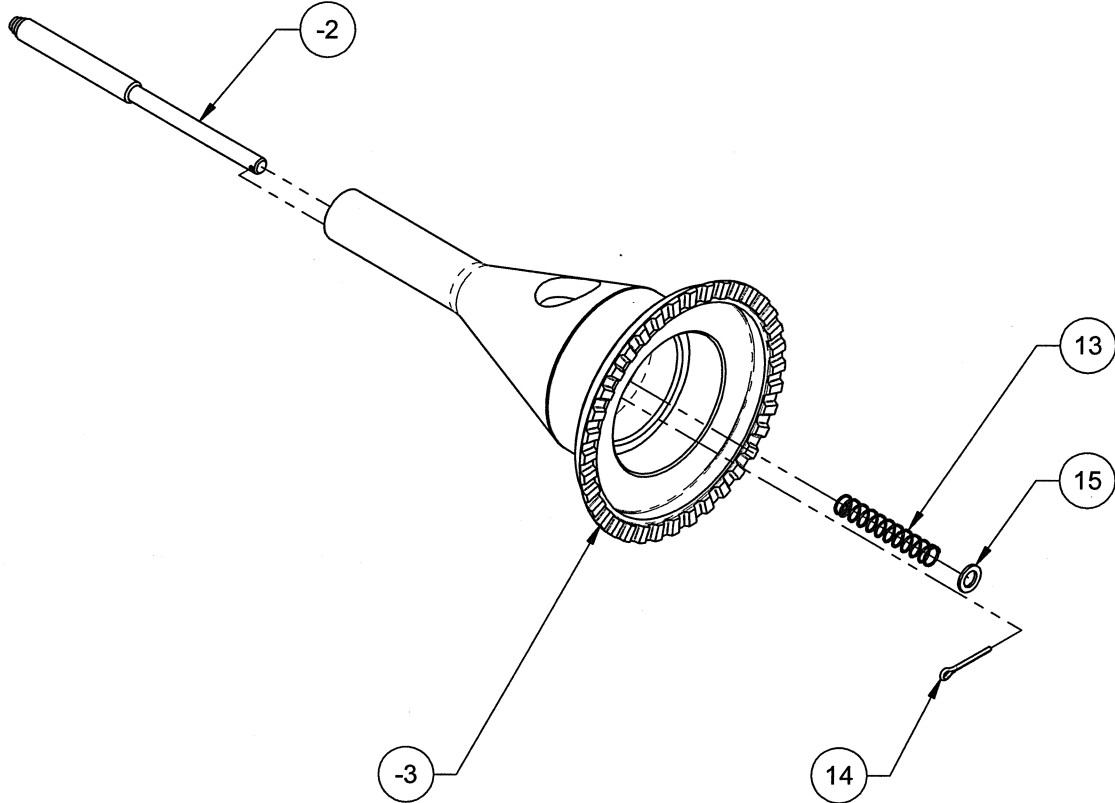
ITEM #	QTY	PART #	PART TITLE
-2	1	RB T101419-2	PLUNGER
-3	1	RB T101419-3	HOUSING ASSEMBLY
13	1	ASSOCIATED SPRING RAYMOND #C0480-038-3000-M	MUSIC WIRE COMPRESSION SPRING 0.480" OD. X 0.038" WIRE DIA. X 3.00" LG. X 3.5 LB/IN
14	1	MS24665-285	CAD. PLATED STEEL COTTER PIN 3/32" DIA. X 1" LG.
15	1	NAS1149F0663P	CAD. PLATED STEEL WASHER 0.390" ID. X 0.625" OD. X 0.063" THK.



**RB T101419-1 PLUNGER ASSEMBLY**

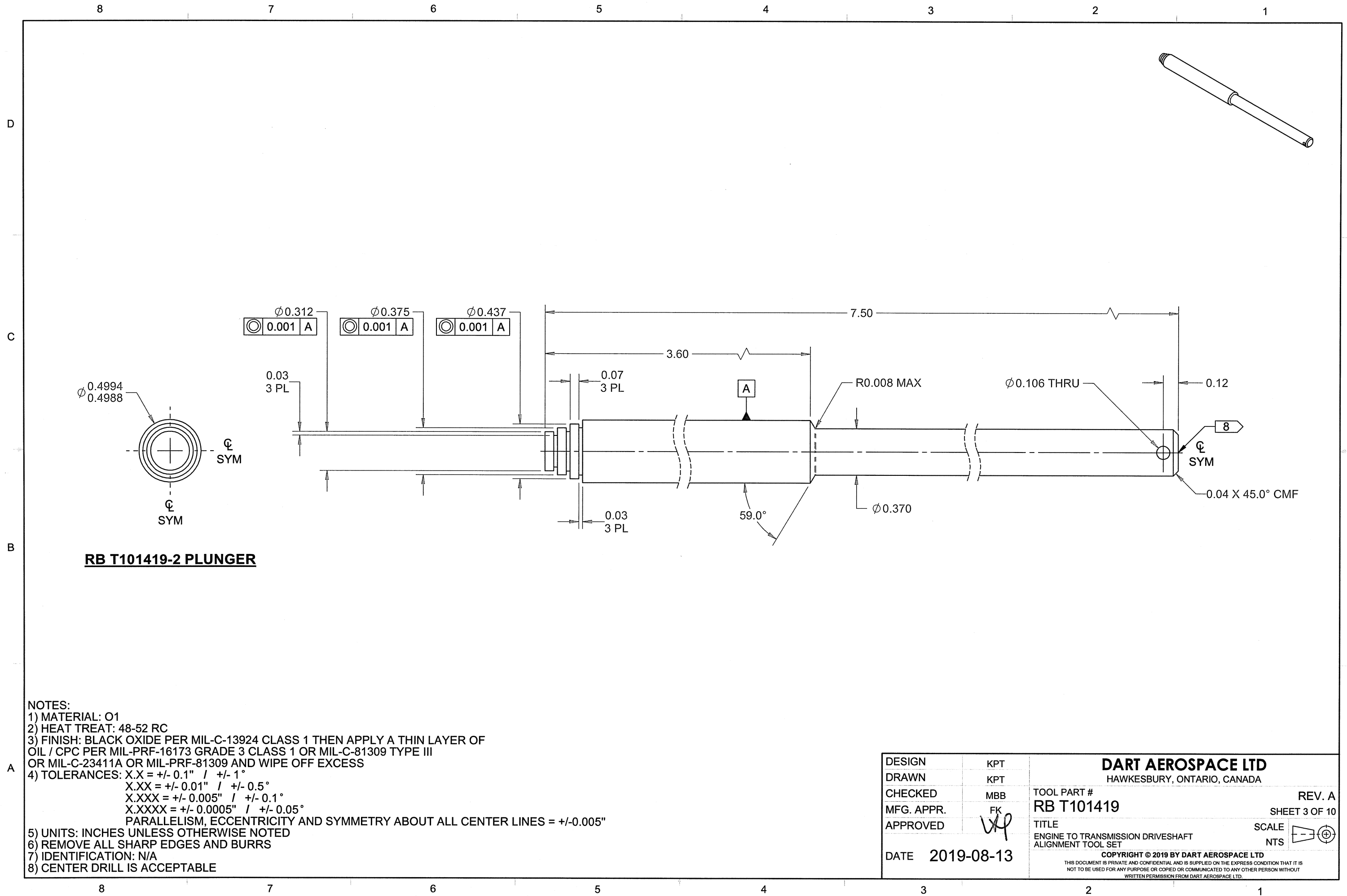


**SECTION A-A**

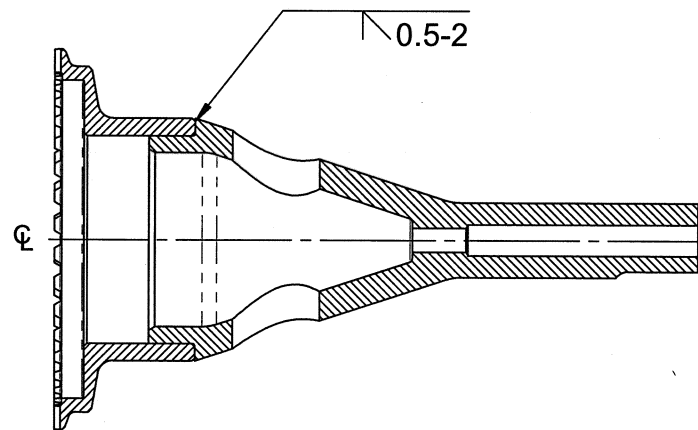
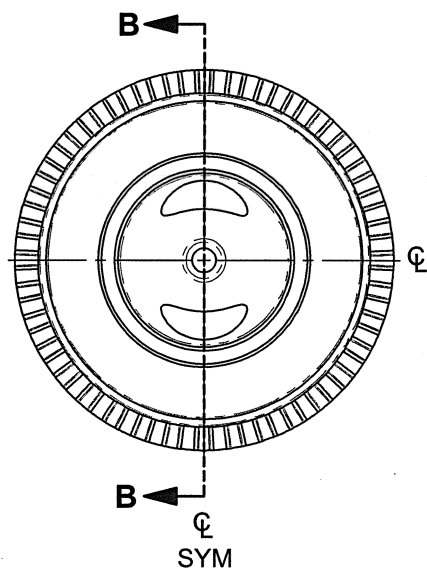


- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) IDENTIFICATION: N/A
  - 7) ASSEMBLE AS SHOWN
  - 8) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

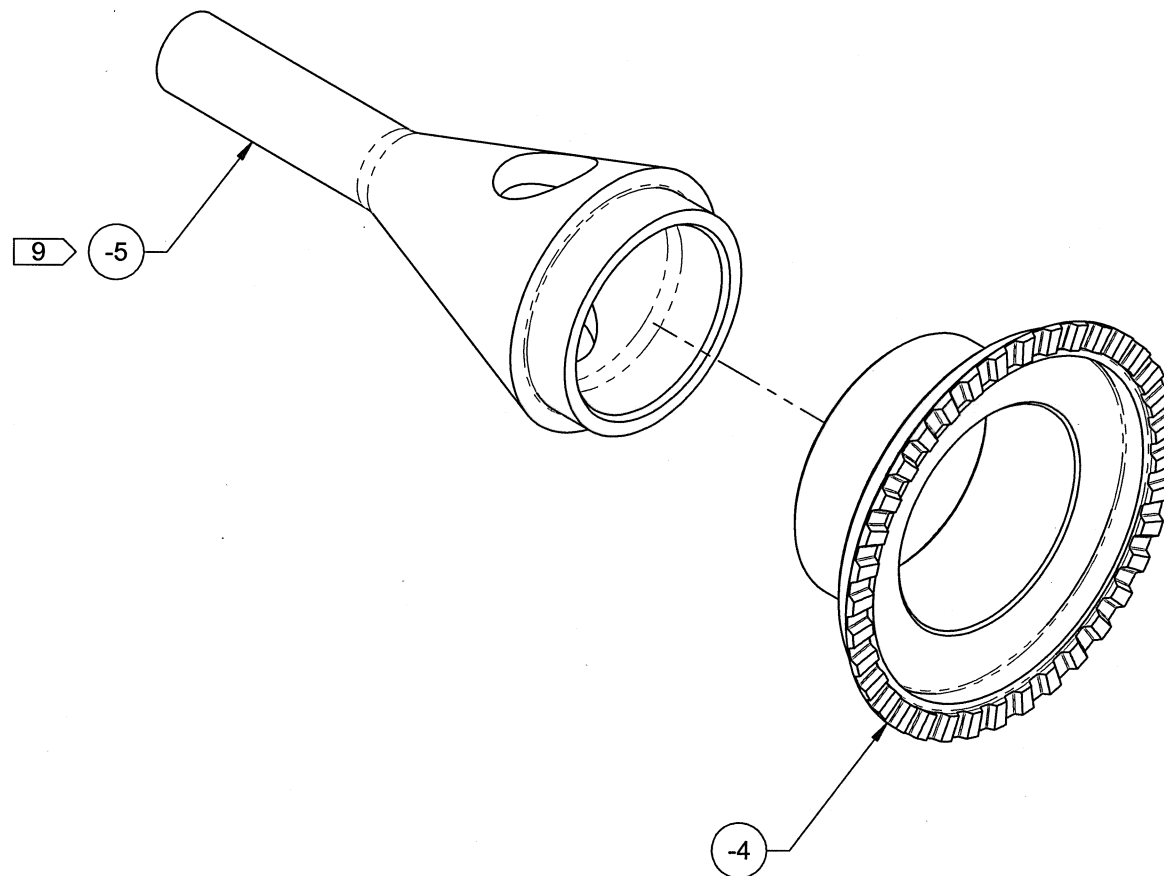
DESIGN	KPT	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	MBB	TOOL PART #	REV. A
MFG. APPR.	FK	<b>RB T101419</b>	SHEET 2 OF 10
APPROVED		TITLE	SCALE
		ENGINE TO TRANSMISSION DRIVESHAFT	NTS
		ALIGNMENT TOOL SET	
DATE	2019-08-13	COPYRIGHT © 2019 BY DART AEROSPACE LTD	
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ITEM #	QTY	PART #	PART TITLE
-4	1	RB T101419-4	COUPLING
-5	1	RB T101419-5	HOUSING



**SECTION B-B**

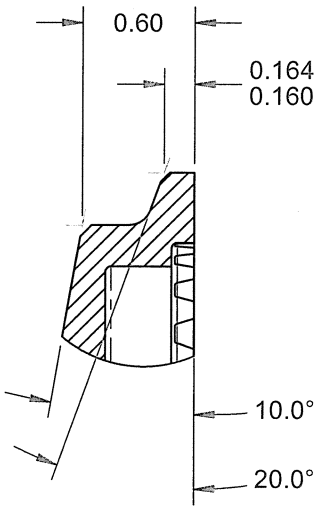


**RB T101419-3 HOUSING ASSEMBLY**

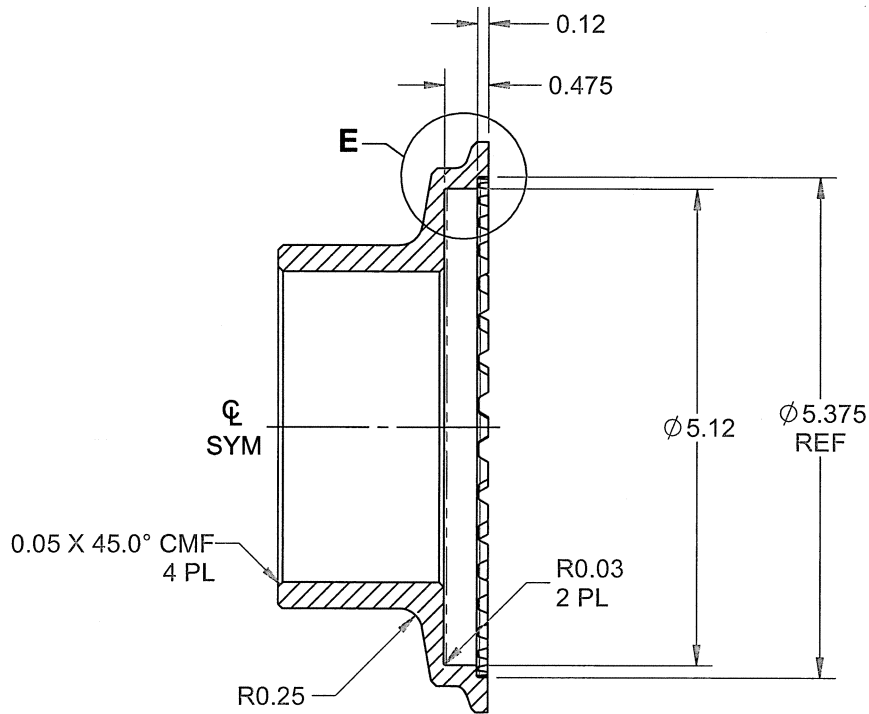
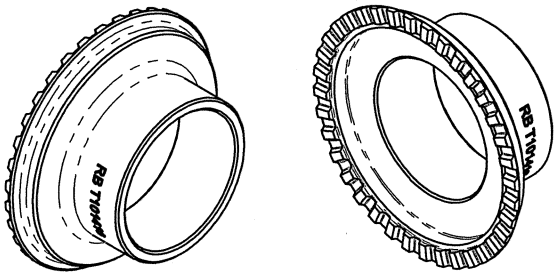
- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: ANODIZE RED PER MIL-A-8625 TYPE 2 CLASS 2
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) IDENTIFICATION: N/A
  - 7) ASSEMBLE AS SHOWN
  - 8) REMOVE ALL SHARP EDGES, BURRS, AND WELD SPATTERS
  - 9) PRESS FIT ITEM -5 WITH ITEM -4

DESIGN	KPT	<b>DART AEROSPACE LTD</b>	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MBB	TOOL PART #	REV. A
MFG. APPR.	FK	<b>RB T101419</b>	SHEET 4 OF 10
APPROVED		TITLE	SCALE
		ENGINE TO TRANSMISSION DRIVESHAFT	NTS
		ALIGNMENT TOOL SET	
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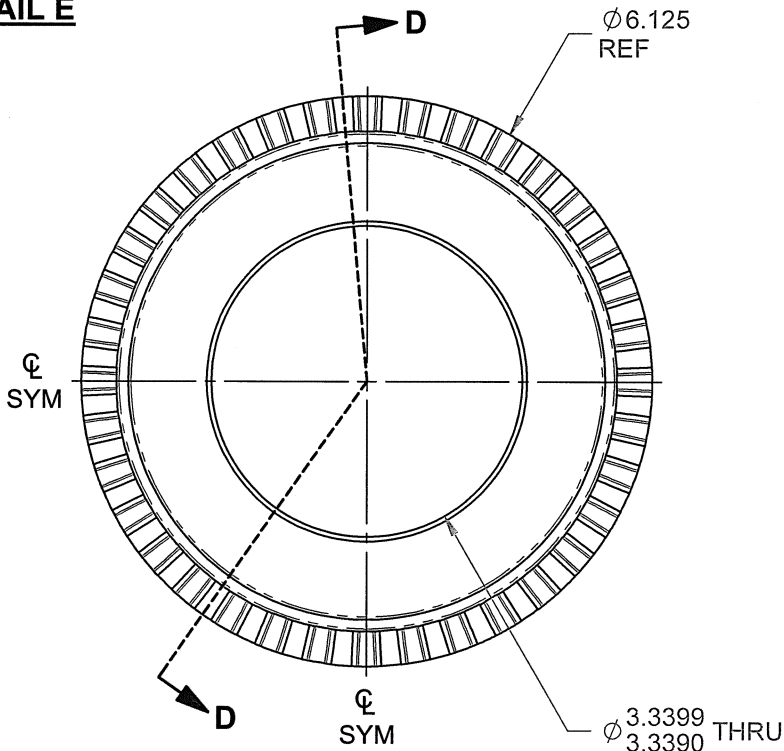
CONCAVE CURVIC GEAR DATA	
NUMBER OF TEETH	36
PRESSURE ANGLE	30.0°
OUTSIDE DIAMETER	Ø6.125±0.001
INSIDE DIAMETER	Ø5.375±0.001
DIAMETRAL PITCH AT OUTSIDE DIAMETER	5.878±0.001
ADDENDUM	0.046-0.042
WHOLE DEPTH	0.104-0.100
TOOTH THICKNESS	0.267±0.001
FILLET RADIUS	R0.03-0.02



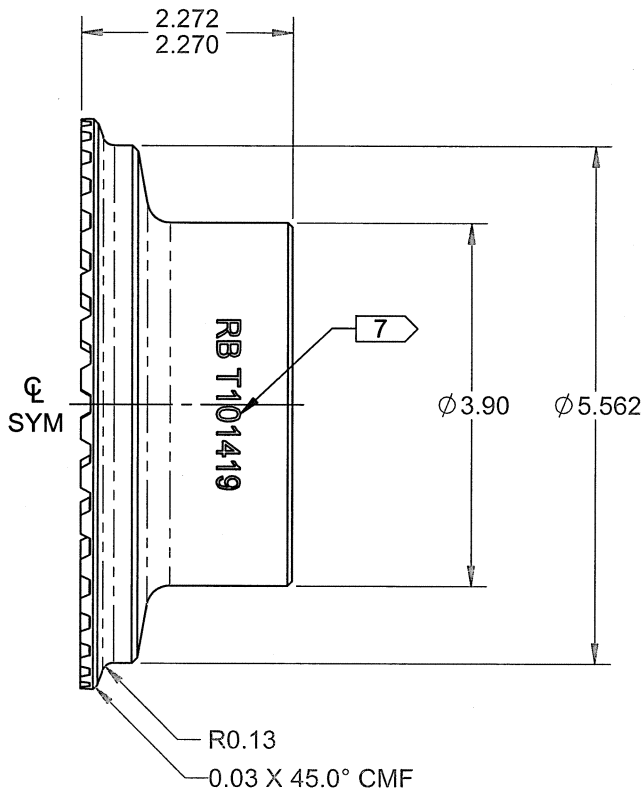
DETAIL E



SECTION D-D  
(ROTATED 5° CW)



RB T101419-4 COUPLING



- NOTES:
- 1) MATERIAL: 6061-T6
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) REMOVE ALL SHARP EDGES AND BURRS
  - 7) IDENTIFICATION: MACHINE ENGRAVE OR DOT MARK T/N, "RB T101419", AS SHOWN
  - 8) ALL NON-DIMENSIONED FEATURES MUST MAINTAIN A TOLERANCE OF +/- 0.005" PER CAD FILE RB T101419-4 REV. A.STEP

DESIGN KPT  
DRAWN KPT  
CHECKED MBB  
MFG. APPR. FK  
APPROVED *[Signature]*  
DATE 2019-08-13

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA  
TOOL PART #  
**RB T101419**  
REV. A  
SHEET 5 OF 10  
TITLE  
ENGINE TO TRANSMISSION DRIVESHAFT  
ALIGNMENT TOOL SET  
SCALE  
NTS  
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D

C

B

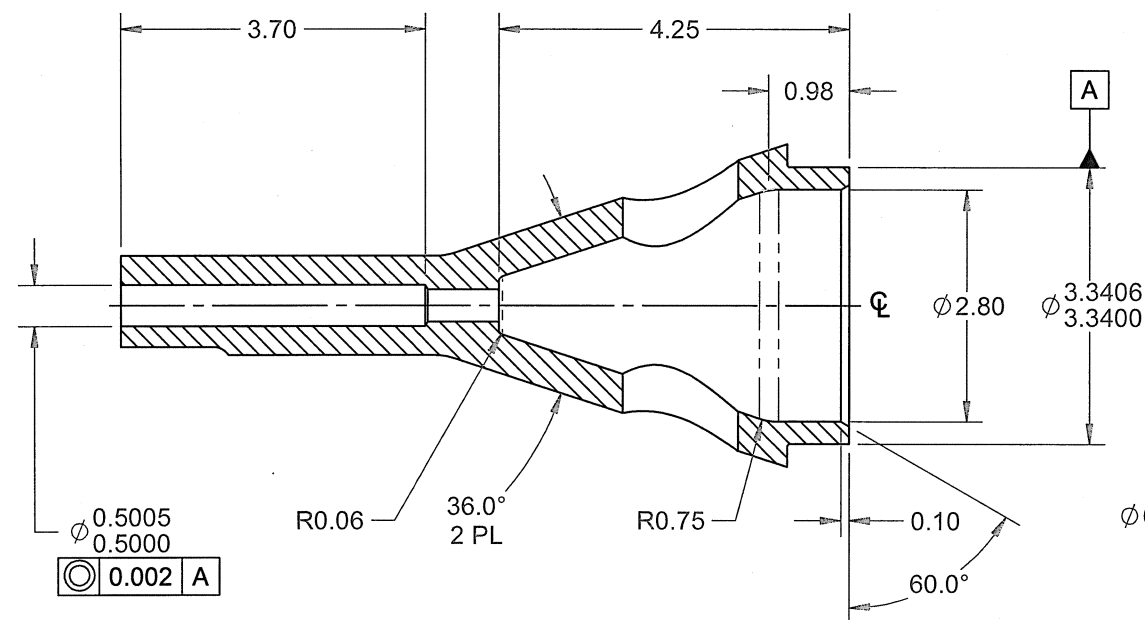
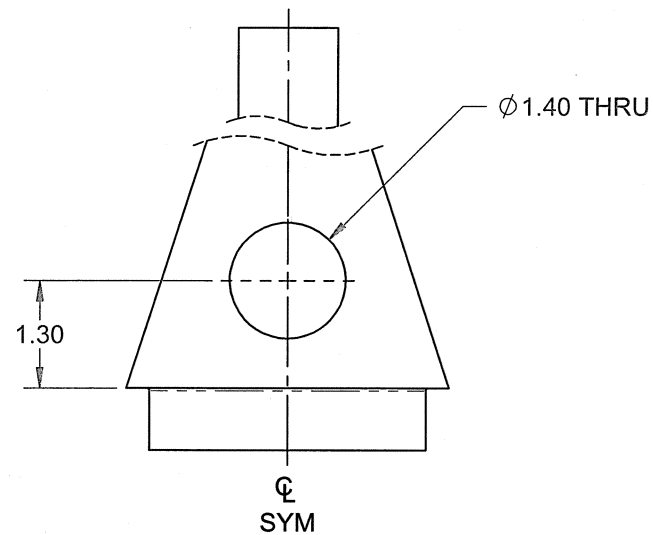
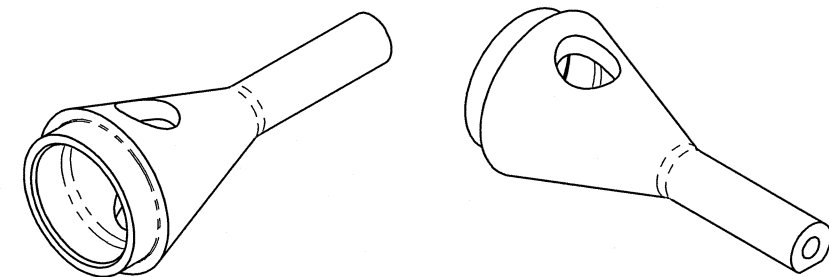
A

D

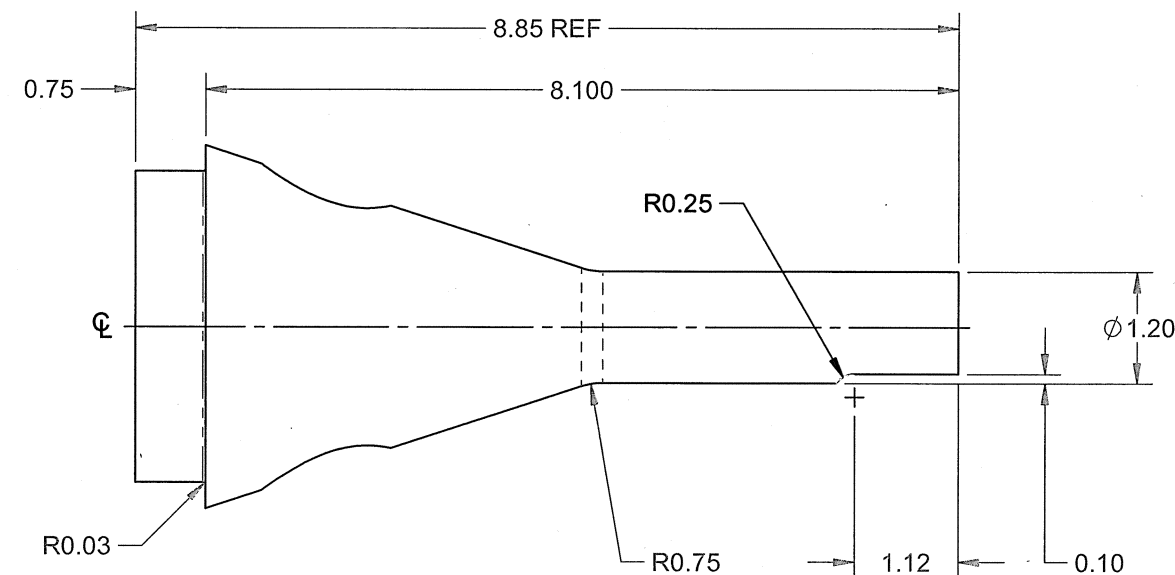
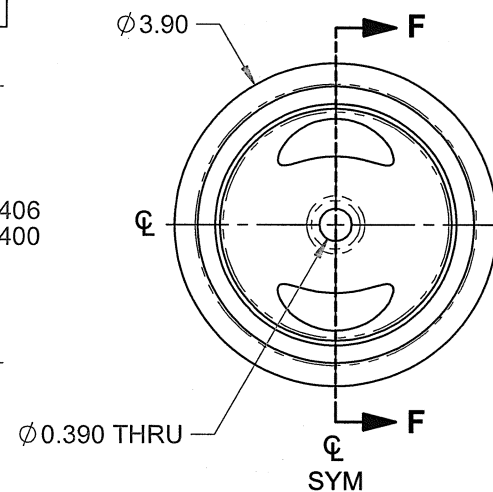
C

B

A



SECTION F-F

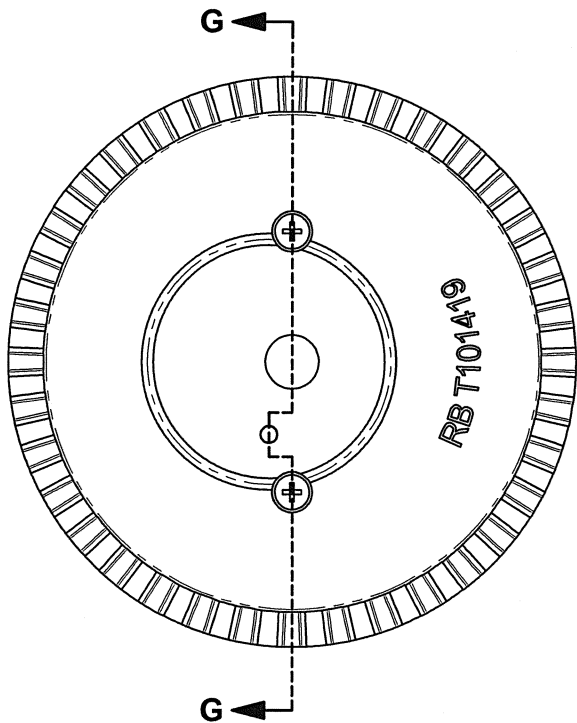


RB T101419-5 HOUSING

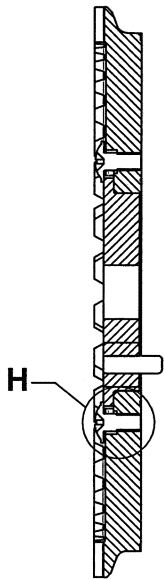
- NOTES:
- 1) MATERIAL: 6061-T6
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) REMOVE ALL SHARP EDGES AND BURRS
  - 7) IDENTIFICATION: N/A

DESIGN	KPT	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	MBB	TOOL PART #	REV. A
MFG. APPR.	FK	<b>RB T101419</b>	SHEET 6 OF 10
APPROVED	VLP	TITLE	SCALE
		ENGINE TO TRANSMISSION DRIVESHAFT	NTS
		ALIGNMENT TOOL SET	
DATE	2019-08-13	COPYRIGHT © 2019 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

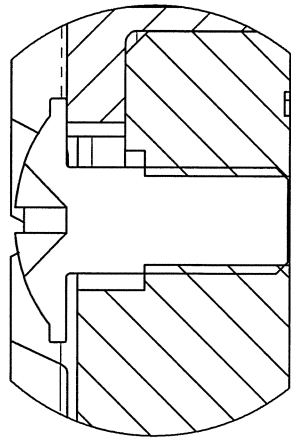
ITEM #	QTY	PART #	PART TITLE
-7	1	RB T101419-7	PLATE ASSEMBLY
-9	1	RB T101419-9	PLATE
16	2	AN525-10R6	CAD. PLATED STEEL WASHER HEAD SCREW #10-32 X 3/8" LG.



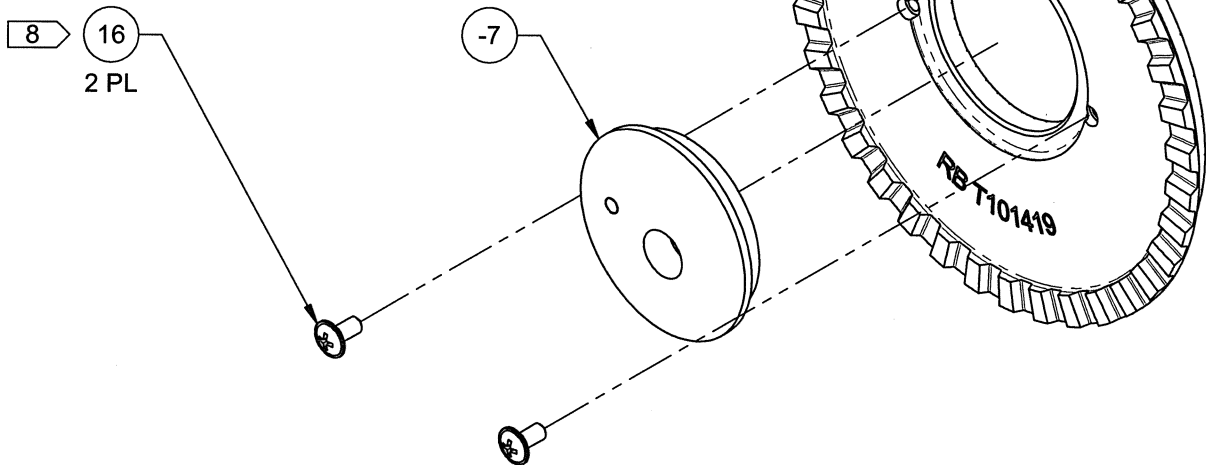
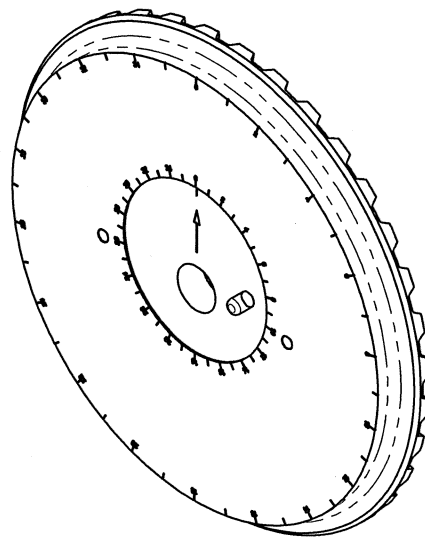
RB T101419-6 TARGET ASSEMBLY



SECTION G-G



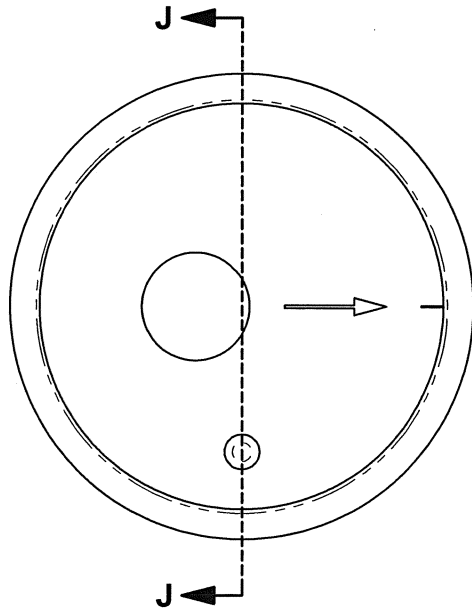
DETAIL H  
2 PL



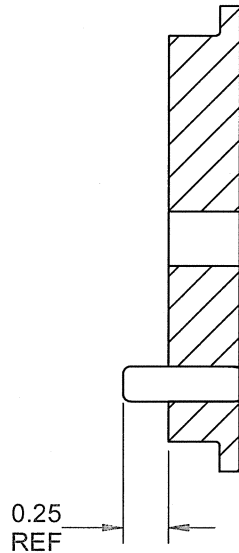
- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) IDENTIFICATION: N/A
  - 7) ASSEMBLE AS SHOWN
  - 8) INSTALL ITEM 16 HAND TIGHT
  - 9) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

DESIGN	KPT	<b>DART AEROSPACE LTD</b>	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MBB	TOOL PART #	REV. A
MFG. APPR.	FK	<b>RB T101419</b>	SHEET 7 OF 10
APPROVED		TITLE	SCALE
		ENGINE TO TRANSMISSION DRIVESHAFT	NTS
		ALIGNMENT TOOL SET	
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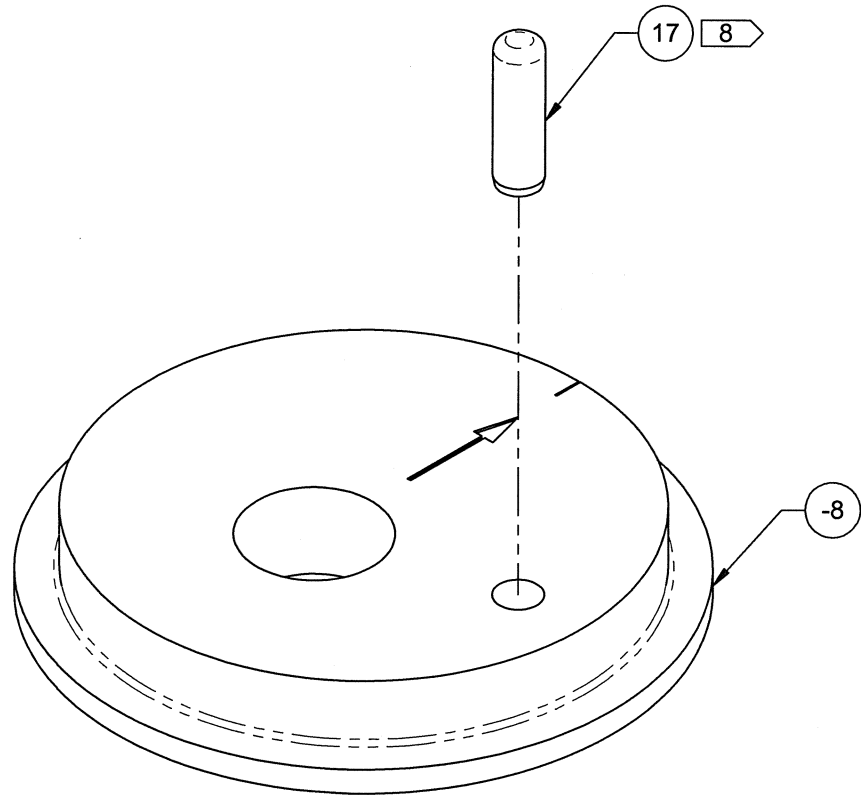
ITEM #	QTY	PART #	PART TITLE
-8	1	RB T101419-8	TARGET PLATE
17	1	MS16555-40	BLACK OXIDE STEEL DOWEL PIN 3/16" DIA. X 5/8" LG.





**RB T101419-7 PLATE ASSEMBLY**



**SECTION J-J**



- NOTES:
- 1) MATERIAL: N/A
  - 2) HEAT TREAT: N/A
  - 3) FINISH: N/A
  - 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°  
X.XX = +/- 0.01" / +/- 0.5°  
X.XXX = +/- 0.005" / +/- 0.1°  
X.XXXX = +/- 0.0005" / +/- 0.05°  
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
  - 5) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 6) IDENTIFICATION: N/A
  - 7) ASSEMBLE AS SHOWN
  - 8) APPLY RETAINING COMPOUND LOCTITE 620 OR EQUIVALENT ON MATING SURFACES  
THEN PRESS FIT ITEM 17 FLUSH TO SURFACE OF ITEM -8, AND REMOVE EXCESS

DESIGN	KPT	<b>DART AEROSPACE LTD</b>	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MBB	TOOL PART #	REV. A
MFG. APPR.	FK	<b>RB T101419</b>	SHEET 8 OF 10
APPROVED		TITLE	SCALE
		ENGINE TO TRANSMISSION DRIVESHAFT	NTS
		ALIGNMENT TOOL SET	
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